

PATENT ABSTRACTS OF JAPAN

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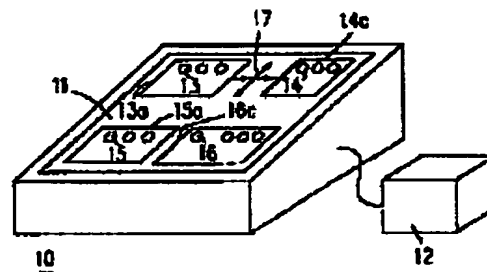
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(54) TELEVISION STUDIO OR OPERATION DEVICE FOR PRODUCTION UNIT OF TELEVISION RELAY CAR

(57)Abstract:

PROBLEM TO BE SOLVED: To simply configure the operation device and to attain flexible application of the device to the system and simple operation.

SOLUTION: Operation elements 13-16 required for the production are used to control programming so as to build up an operation interface 11 before the production is started. Then the operation elements 13-16 are selected among operation elements filed in terms of the software in a memory 12 and called and loaded to the operation interface 11.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]** about the thing of form which has a control device for processing the picture signal which this invention is a manual operating device to a television studio or the production unit of an ob van, and comes.

[0002]In order to make the Television Sub-Division program, a mixer is required, for example. A mixer usually combines the picture signal of two or more sources mutually simultaneously, for example according to a video artist's morphological hope. This mixer has input crossbar and can supply two or more usable input signals to various processing steps with this input crossbar. Furthermore, this kind of mixer has one or more mixing and an effect unit (ME unit), for example, In accordance with the chroma-key method, fade-in of the predetermined foreground-image signal can be carried out to a background picture signal by this, or the signal of a character generator can be superimposed on a background signal. To the control table of such a studio type mixer, usually Hundreds control device, For example, the push button, the rotating knob, and the slide lever are arranged, The present mixer generation's control table, For example, BTS mixer formal DD30 (BTS-Prospekt.) Diamond Digital"Produktionsmischer fuerserielle digitale Komponentensignale" -- ***** of reference -- it already has a remarkable size. Many push buttons are especially arranged at two rows or three rows.

[0003]

[Problem to be solved by the invention]The problem of this invention is constituting so that the manual operating device of the form stated to the beginning may be constituted simply, and can be applied flexibly and can be operated easily.

[0004]

[Means for solving problem]By this invention, a manipulation interface an aforementioned problem before the start of work, Programming control can be carried out by a required control

device to a work production, and it can build, and it is chosen as a memory from the control device filed by software, and is called to it, and it constitutes and a required control device is solved so that it may be loaded to a manipulation interface.

[0005]

[Mode for carrying out the invention]before a start of a work production predetermined in this with a studio or an ob van -- therefore, a required control device is chosen electronically, and is called and it means loading to a manipulation interface. Here, connection with the control device of work equipment is made electronically. That is, when operating one of the control device of this, the trigger of the control facility of a predetermined request is carried out with work equipment. In the manual operating device of this invention, the control device is not wired fixed like the former and is variously connected with the constituent child of mutual and work equipment integrative according to a desired program. Therefore, only the actually required target control device can be chosen for a predetermined work process. As compared with the control table of the standard which has a control device of a large number which were described above, with the composition of this invention, a manipulation interface is intelligible and a structural space can be saved. The manual operating device of this invention of such a form is what is called a virtual manual operating device. That is, a manual operating device is created by software rather than exists as a spatial component member like [until now] a publicly known mixer table.

[0006]Therefore, according to this invention, the necessity for the predetermined Television Sub-Division work of the number and function of a control device can be suited as the purpose. The control device of a work unit can be flexibly assigned to a predetermined work function, and the hope of a work production thru/or an operator can be suited individually.

[0007]In the advantageous composition of this invention, - manipulation interface, Are the screen in which the programmable integrated circuit device was provided, and the - aforementioned screen, It is connected with the memory which contains a control device by software, and a desired control device can arrange in the arbitrary parts of a screen by software with the graphical symbol of affiliation, respectively at the time of - load process.

[0008]Flexible assignment of the control device by this invention has the still more nearly following advantages. That is, it not only can detect and control the function of a work unit, but to a work unit, it has the advantage that the control facility to a storage like the disk memory for performing the function which does not usually exist, for example, a picture signal, can also be detected and controlled.

[0009]a control device -- free -- programming -- by the ability to constitute controllable, the kind, position, and size of a control device can be spatially created thru/or set as a screen like a request. Therefore, for example, if the kind of control device is first chosen and called to a predetermined work production and being loaded to a screen, as for Lycium chinense, this

control device will be made in the arbitrary parts of a screen according to a request after that. If only a restricted number which does not fill the size in that whole case, for example, a screen, of control devices are required, the graphical display of this control device is expandable. Thereby, a control device comes to occupy the whole screen. By this, general-view nature improves and operation becomes easy.

[0010]Easy operation of the control device virtually created by the aforementioned screen is performed by contact of a finger, for example with the composition of this invention (touch screen technology). This kind of operation information does not need a special additional constituent child, but enables high-speed access to a control device.

[0011]Operation of other forms is clicking the control device by which image formation was carried out to the screen by a mouse click. The advantage of this operation form is it being the spot, namely, there being no manual operating device itself by the way, leaving an operation key to some extent, and being able to operate it.

[0012]- manipulation interface comprises another composition of this invention like before, It is a push button arranged by fixed spatial assignment, and this push button is connected with the memory which contains a control device by software, and a desired control device can be assigned to arbitrary push buttons by software in - load process, respectively.

[0013]An advantage which was described above also in the case of this composition is acquired. That is, the necessity for the predetermined Television Sub-Division work of the number and function of a control device can be suited as the purpose. Even in this case, the control device of a work unit can be flexibly assigned to a predetermined work function, and the hope of a work production thru/or an operator can be suited individually. In this composition of this invention, the difference with the above-mentioned "virtual" composition is that the push switch operated by a hand is formed in a predetermined part. However, fixed wiring is not carried out like an old publicly known mixer table, and this push switch can assign a desired change function individually by this invention. The function of each control device depends also for this composition on a configuration. Such composition is advantageous as a solving means of the shift what is called to virtual structure (a control device is created and graphically displayed on a screen) described above from the old publicly known mixer table which has the control device by which fixed wiring of a large number was carried out. This composition is advantageous to the application purpose whose push button arranged by carrying out position immobilization is required thru/or advantageous. This key structure also has the advantage that space efficiency is improved. It is because a predetermined function can be assigned to the predetermined desired part of a control table and only an actually required control device is activated also here.

[0014]In the aforementioned composition described at the end, an optical display is provided in a control device and it becomes visible each functioning of the control device which ****s in a

program by this display and can be built freely. Operation becomes easy by this and general-view nature improves.

[0015]The control device of this invention is advantageously used in the work unit arranged at the studio or the relay car. Equipment for this work unit to process at least one image signal source and picture signal, Have an output side of the processed picture signal and the image signal processor of - each as a become [independent] type component unit, It is unified by the central arithmetic unit, without depending mutually, the input-and-output side of - image signal processor is connected with the controllable transfer device, and arbitrary assignment of an image signal processor is attained with this transfer device.

[0016]This kind of production box is indicated in detail to precedence application of these people. The flexible system for the Television Sub-Division program production is obtained by such production box. This system is not restricted by fixed un-intensive wiring. Thereby, each demand of a work production and/or an operator can be easily suited satisfactorily in the image signal source and image signal processor which exist in a television studio or an ob van. The existing usable image processing system is built freely, without being dependent on wiring, and, thereby, is used for optimum. If this invention is used for this kind of production box, a means to suit a respectively required image signal processor promptly and simply in a manual operating device will be obtained.

[0017]

[Working example]The manual operating device 10 of drawing 1 has the manipulation interface 11, and this manipulation interface is constituted as a screen which has a programmable integrated circuit device. The manual operating device 10 is connected with the memory 12, and all the desired control devices are filed in the memory by software. A variously different control device group of 1-n can be provided. In this working example, the manipulation interface 11 is built so that four different groups of the control devices 13-16 may be arranged on Screen 11. The control devices 13-16 are summarized in the fields 13a-16a which can be built to one freedom, respectively. In this working example, the control device 13 for edit, the control device 14 for a mini pool, the control device 15 for mixing, and the control device 16 to DVE apparatus are formed. The control devices 13-16 can change freely on this virtual manipulation interface 11 according to the size and position of the arrow 17. It is also possible similarly to move the control device summarized in the fields 13a-16a with a manipulation interface as one unit.

[0018] Drawing 2 shows the manual operating device 18 which has the manipulation interface 1. This manipulation interface has the control device 20 arranged fixed in space. This manual operating device 18 is also connected with the memory 12, and the necessary control device is memorized by software by this memory. It depends on a configuration for the function of each control device 20 which comprised conventional hardware technology also in this case. Each

function of each control device 20 can be made visible by the control device 20 by the optical display a, b, and c.

[0019]Drawing 3 shows the production box 21 for making the Television Sub-Division program with a studio or a relay car. This production box 21 is connected with two or more image signal sources 22, for example, a camera, or a magnetic tape recording device with the signal output side 23 to an antenna or a monitor by the output side by the input side again. The production box 21 is used as a central arithmetic unit with a studio or a relay car with the signal processor 24 assigned to this, for example, the mixer stage, video effect equipment, a step generator, etc. The controllable transfer device to the image signal processor 24 is shown by 25. In order to operate this production unit 21, the manual operating device 10 shown in drawing 1 and drawing 2 and/or 18 are used. This manual operating device is connected with the production box by the suitable track.

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CLAIMS

[Claim(s)]

[Claim 1]In a thing of form which has a control device (13-16, 20) for processing a picture signal which is a manual operating device to a television studio or a production unit of an ob van, and comes, Before a start of work, a manipulation interface (11, 19) can carry out programming control by a required control device (13-16, 20) to a work production, and can build, A manual operating device characterized by what a required control device (13-16, 20) is chosen as a memory (12) from a control device filed by software, and is called to it, and is loaded to a manipulation interface (11, 19).

[Claim 2]A manipulation interface (11) is the screen in which a programmable integrated circuit device was provided.

It is connected with a memory (12) which contains a control device (13-16) by software, and this screen is a load process, The manual operating device according to claim 1 to which a desired control device (13-16) is assigned by software with a graphical symbol (a, b, c) of affiliation in arbitrary parts of a screen (11), respectively.

[Claim 3]A control device (13-16) by which image formation was carried out to a screen (11) is the operational manual operating device according to claim 2 by contact (touch screen).

[Claim 4]A control device (13-16) by which image formation was carried out to a screen (11) is the operational manual operating device according to claim 2 in a click, for example, a mouse click.

[Claim 5]A manipulation interface is a push button (20) which was constituted like before and has been arranged fixed in space.

The manual operating device according to claim 1 with which this push button is connected with a memory (12) which contains a control device (20) by software, it is a load process and a desired control device (20) is assigned to arbitrary push buttons (20) by software, respectively.

[Claim 6]The manual operating device according to claim 5 with a visible function of a control device which an optical display (a, b, c) is provided in a control device (20), ****ed in a program by the display concerned, and was built freely.

[Claim 7]It is used in a production unit (production box 21) arranged at a studio or a relay car, It has at least one image signal source (22), an image signal processor, and an output side (23) to a processed picture signal, Each image signal processor (24) without depending mutually as a become [independent] type component unit, It is collected into a central arithmetic unit (21), is connected with a controllable transfer device (25) by the input-and-output side of an image signal processor (24), and with this transfer device. A manual operating device given [from Claim 1 to 6] in any 1 clause which can assign [free] an image signal processor (24).

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a schematic view of the manual operating device which has a manipulation interface of the 1st composition.

[Drawing 2]It is a schematic view of the manual operating device which has a manipulation interface of the 2nd composition.

[Drawing 3]It is a schematic view of a production box.

[Explanations of letters or numerals]

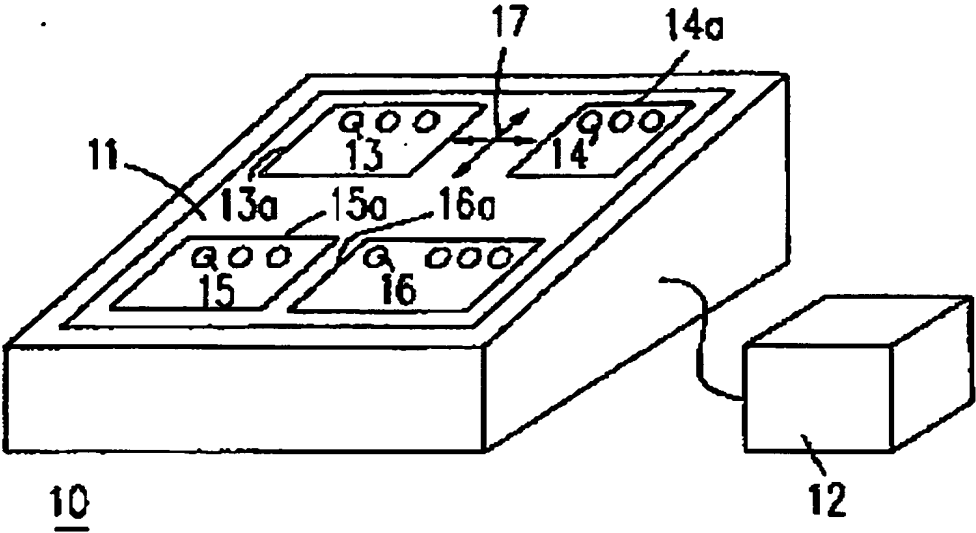
10 Manual operating device

11 Screen

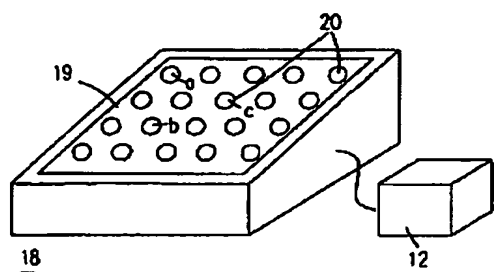
12 Memory

13-16 Control device

[Translation done.]



Drawing selection Drawing 2



[Translation done.]